Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)

2. (Currently Amended) Vibrating structure according to ~~claim 1~~claim 11, wherein the side wall of the hollow shell has a constant thickness.

3. (Currently Amended) Vibrating structure according to ~~claim 1~~claim 11, wherein the side wall of the hollow shell has a variable thickness, from a first value at the free end to a second value, greater than the first value, at the base of the hollow shell.

4. (Previously Presented) Vibrating structure according to claim 3, wherein the thickness of the side wall of the hollow shell varies linearly between the free end and the base of the hollow shell.

5. (Currently Amended) Vibrating structure according to ~~claim 1~~claim 11, wherein the external face of the side wall of the hollow shell is cylindrical.

6. (Currently Amended) Vibrating structure according to ~~claim 1~~claim 11, wherein the external face of the side wall of the hollow shell is tapered.

7. (Currently Amended) Vibrating structure according to ~~claim 1~~claim 11, wherein the base of the side wall of the hollow shell has a predetermined thickness and a circular cross-section of predetermined radius.

8. (Currently Amended) Vibrating structure according to ~~claim 1~~claim 11, wherein the base of the side wall of the hollow shell has a predetermined thickness and an elliptical cross-section.

9. (Currently Amended) Vibrating structure according to ~~claim 1~~claim 16, wherein the vibrating wall is made in a silicon substrate.

10. (Canceled)

11. (Currently Amended) Micro-machined vibrating structure comprising a fixing end, connected in secured manner to a fixed support, and at least one vibrating wall, in which progressive or stationary waves are generated and comprising a base and a free end, the vibrating wall being formed by a side wall of a hollow shell, vibrating structure wherein the fixing end is formed by the base of the hollow shell, a naturally decoupled zone being situated between the fixing end and the free end of the vibrating wall, ~~Vibrating structure according to claim 9,~~ wherein the vibrating wall is made in a silicon substrate and the fixed support is formed by an over-doped layer of the substrate.

12. (Currently Amended) Micro-machined vibrating structure comprising a fixing end, connected in secured manner to a fixed support, and at least one vibrating wall, in which progressive or stationary waves are generated and comprising a base and a free end, the vibrating wall being formed by a side wall of a hollow shell, vibrating structure wherein the fixing end is formed by the base of the hollow shell, a naturally decoupled zone being situated between the fixing end and the free end of the vibrating wall, ~~Vibrating structure according to claim 9,~~ wherein the vibrating wall is made in a silicon substrate and the fixed support is formed by a silicon oxide layer formed under the substrate.

13. (Currently Amended) Micro-machined vibrating structure comprising a fixing end, connected in secured manner to a fixed support, and at least one vibrating wall, in which progressive or stationary waves are generated and comprising a base and a free end, the vibrating wall being formed by a side wall of a hollow shell, vibrating structure wherein the fixing end is formed by the base of the hollow shell, a naturally decoupled zone being situated between the fixing end and the free end of the vibrating wall, ~~Vibrating structure according to claim 9,~~ wherein the vibrating wall is made in a silicon substrate and the fixed support is formed by a silicon oxide layer buried in the substrate.

14. (Currently Amended) Micro-gyroscope comprising at least one vibrating structure according to ~~claim 1~~claim 16, and electrodes formed in the same substrate as the vibrating wall of the vibrating structure.

15. (Currently Amended) Micro-gyroscope according to ~~claim 14~~claim 16, comprising two symmetrically arranged vibrating structures and sealed by their respective fixed supports.

16. (New) Micro-machined vibrating structure comprising a fixing end, connected in secured manner to a fixed support, and at least one vibrating wall, in which progressive or stationary waves are generated and comprising a base and a free end, the vibrating wall being formed by a side wall of a hollow shell, vibrating structure wherein the fixing end is formed by the base of the hollow shell, a naturally decoupled zone being situated between the fixing end and the free end of the vibrating wall, wherein at least the bottom part of the side wall of the hollow shell has a symmetrical truncated conical shape, with a thickness varying from a first value at the free end to a second value, greater than the first value, at the base of the hollow shell.

17. (New) Vibrating structure according to claim 16, wherein the side wall comprises a cylindrical part above the bottom part.

18. (New) Vibrating structure according to claim 16, wherein the side wall has a circular cross-section.

19. (New) Vibrating structure according to claim 16, wherein the side wall has an elliptical circular cross-section.

20. (New) Vibrating structure according to claim 12, wherein the side wall of the hollow shell has a constant thickness.

21. (New) Vibrating structure according to claim 12, wherein the side wall of the hollow shell has a variable thickness, from a first value at the free end to a second value, greater than the first value, at the base of the hollow shell.

22. (New) Vibrating structure according to claim 21, wherein the thickness of the side wall of the hollow shell varies linearly between the free end and the base of the hollow shell.

23. (New) Vibrating structure according to claim 12, wherein the external face of the side wall of the hollow shell is cylindrical.

24. (New) Vibrating structure according to claim 12, wherein the external face of the side wall of the hollow shell is tapered.

25. (New) Vibrating structure according to claim 12, wherein the base of the side wall of the hollow shell has a predetermined thickness and a circular cross-section of predetermined radius.

26. (New) Vibrating structure according to claim 12, wherein the base of the side wall of the hollow shell has a predetermined thickness and an elliptical cross-section.

27. (New) Vibrating structure according to claim 13, wherein the side wall of the hollow shell has a constant thickness.

28. (New) Vibrating structure according to claim 13, wherein the side wall of the hollow shell has a variable thickness, from a first value at the free end to a second value, greater than the first value, at the base of the hollow shell.

29. (New) Vibrating structure according to claim 28, wherein the thickness of the side wall of the hollow shell varies linearly between the free end and the base of the hollow shell.

30. (New) Vibrating structure according to claim 13, wherein the external face of the side wall of the hollow shell is cylindrical.

31. (New) Vibrating structure according to claim 13, wherein the external face of the side wall of the hollow shell is tapered.

32. (New) Vibrating structure according to claim 13, wherein the base of the side wall of the hollow shell has a predetermined thickness and a circular cross-section of predetermined radius.

33. (New) Vibrating structure according to claim 13, wherein the base of the side wall of the hollow shell has a predetermined thickness and an elliptical cross-section.